SUBMIT IN TRIPLICATE.

(Other instructions on reverse side)

FORM APPROVED OMB NO. 1004-0136 Expires: February 28, 1995

UNITED STATES

DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT	
	5. LEASE DESIGNATION AND SERIAL NO NMNM-101552
APPLICATION FOR PERMIT TO DRILL OR DEEPEN	6. IF INDIAN, ALLOTTEE OR TRIBE NAM
DRILL DEEPEN DEEPEN D	7. UNIT AGREEMENT NAME 7. CV N/A
OIL GAS WELL OTHER SINGLE MULTIPLE ZONE ZONE	8. FARM OR LEASE NAME WELL NO WF Federal 12 #2
Richardson Operating Co. (303) 830-800	
1700 Lincoln St., Suite 1700, Denver, Co. 80203	10. FIELD AND POOL, OR WILDCAT Fru Coal & Harp. PC
1815' FSL & 828' FWL	11. SEC., T., R., M., OR BLK. AND SUBVEY OR AREA
Same 4 DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR FOST OFFICE.	12-30n-14w NMPM
6 air miles NW of Farmington	San Juan NM
LOCATION TO NEAREST PROPERTY OF LEASE LINE, FT (Also to nearest drlg. unit line, if any) 828' 635.16	314.8 & 160
	20 ROTART OR CABLE TOOLS ROTARY
(Show whether DF, RT, GR, etc.) 5,948' ungraded	22. APPROX. DATE WORK WILL STAR July 15, 2001
PROPOSED CASING AND CEMENTING PROGRAM	
SIZE OF HOLE GRADE SIZE OF CASING WEIGHT PER FOOT SETTING DEPTH	QUANGITY OF CEMENT
8-3/4" K-55 7" 20 120' 6-1/4" K-55 4-1/2" 10.5 1,840' This action is subject to technical and proceedural review pursuant to 43 CFR 3165.8	≈36 cu. ft. & to surface ≈260 cu. ft. & to surface
Archaeology report LAC-2000-73c filed 1-12-2001	A
This APD is also serving as a BLM road right-of-way application for an expired property of the serving as a BLM road right-of-way NMNM-101190.	e ting road in NESE 11-30n-14w e NMNM-101552 to Richardson's
	DI DE LA PROPERTE MARIA ATTACHED DE MERCHESENEWIST
	cc: BLM, Colby, OCD (via BLM)
	I proposed new productive zone. If proposal is to dro- r program, if any.
· / · · · · · · · · · · · · · · · · · ·	
N ABOVE SPACE DI SCRIBE PROPOSI DI PROGRAM. Il proposali is to deepen, give data on present productive zone ans keepen directionally, give per unent data on subserface i scallans/and measured and true vertical depits. Give blowout prevente Consultant (505) 4 SIGNED.	66-8120 6-16-0
	66-8120 6-16-0
Consultant (505) 4	DATE
Consultant (505) 4 (This space for Federal or State office use) PERMIT NO	DATE

State of New Mexico Energy. Minerals & Mining Resources Department

OIL CONSERVATION DIVISION Santa Fe. NM 87505

2040 South Pacheco 2011 11 26 25 25

Paol Name

MENDED REPORT

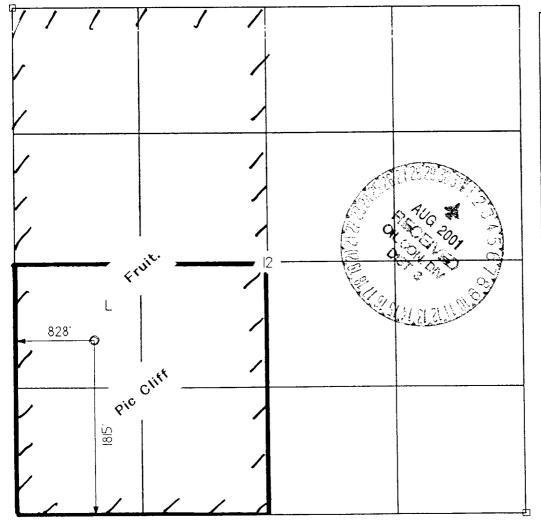
WELL LOCATION AND ACREAGE DEDICATION PLAT

Pool Code

APA Number

30-00	(5-	3071	2 71	629 & 7	78160 l	FRUIT. C	COAL &	HARP. I	HILL F	,C
30-0(5-307/Z) 71629 & 78160 FRUIT. COAL & HARP. HILL Property Code Property Name						Wel Number				
2858	8	we federal					ļ	12 - 2		
OCRID No	QCRID No. Operator Name						Bevation			
0192	9219 - RICHARDSON OPERATING COMPANY					j	5948 ⁻			
		<u> </u>			Surfac	e Location				
U or Lot	Sec.	Тир.	Rge.	Lat lah.	Feet from>	North/South	Feet from>	East/West		County
L	12	30_N.	14.W.		.1815	south	828.	WEST		SAN JUAN
			• .	Batta	m Hale Locatio	n If Different	From Surface			
UL or Lat	\$øc.	Twp.	Rge.	Lat ldn.	Feet from>	North/South	Feet from>	East/West		County
Dedication 160 PC 314.8 FC		int?	Consolida	tion		<u> </u>	Ord	er No.	<u></u>	

OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DMISION



OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature

Printed NameBRIAN WOOD

CONSULTANT Title

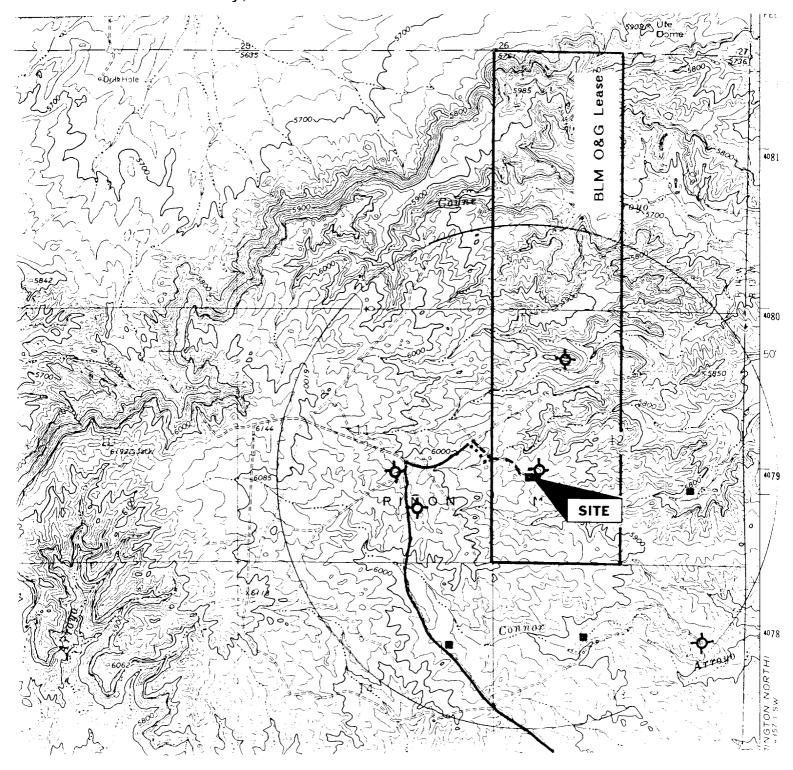
JUNE 16, 2001 Date

SURVEYOR CERTIFICATION

I hereby certify that the well location on this plat was platted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date of Surv Profes

Richardson Operating Co. WF Federal 12 #2 1815' FSL & 828' FWL Sec. 12, T. 30 N., R. 14 W. San Juan County, New Mexico



PROPOSED WELL: ■ EXISTING ROAD: →

EXISTING WELL: ■ ROAD UPGRADE: →

P&A WELL: ◆ ROAD R/W APPL: • • •



PAGE 1

Richardson Operating Co. WF Federal 12 #2 1815' FSL & 828' FWL Sec. 12, T. 30 N., R. 14 W. San Juan County, New Mexico

Drilling Program

1. ESTIMATED FORMATION TOPS

Formation Name	GL Depth	KB Depth	Subsea Elevation
Ojo Alamo Ss	000'	5'	+5,948'
Kirtland Sh	100'	105'	+5,848'
Basal Fruitland Coal	1680'	1685'	+4,267'
Pictured Cliffs Ss	1710'	1715'	+4,238'
Total Depth (TD)*	1840'	1845'	+4,108'

^{*} all elevations reflect the ungraded ground level of 5,948'

2. NOTABLE ZONES

<u>Gas Zones</u>	Water Zones	<u>Coal Zones</u>
Fruitland Coal (1680')	Ojo Alamo (000')	Fruitland Coal (1680')
Pictured Cliffs (1710')	Fruitland Coal (1680')	

Water zones will be protected with casing, cement, and weighted mud. Fresh water encountered during drilling will be recorded by depth, cased, and cemented. Oil and gas shows will be tested for commercial potential based on the well site geologist's recommendations.

3. PRESSURE CONTROL

The drilling contract has not yet been awarded, thus the exact BOP model to be used is not yet known. (A typical 2,000 psi model is on PAGE 3.) Double ram or annular system with a rotating head will be used. All ram preventers and related equipment will be hydraulically tested at nipple up and after any use under pressure to 1000 psi.



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Blind rams will be hydraulically activated and checked for operational readiness each time pipe is pulled out of the hole. All checks of the BOP stack and equipment will be noted on the daily drilling report. BOP equipment will include a kelly cock, floor safety valve, and choke manifold all rated to 2000 psi. Maximum expected pressure is ≈ 735 psi.

4. CASING & CEMENT

Hole Size	O.D.	Weight (lb/ft)	<u>Grade</u>	<u>Age</u>	GL Setting Depth
8-3/4"	7"	20	K-55	New	120'
6-1/4"	4-1/2"	10.5	K-55	New	1,840'

Surface casing will be cemented to surface with ≈ 36 cu. ft. (≈ 30 sx) Class B + 2% CaCl₂. Volume is based on 100% excess, yield of 1.18 cu. ft./sk, and slurry weight of 15.6 PPG. WOC = 12 hours. Pressure test surface casing to 600 psi for 30 minutes.

Production casing hole will first be cleaned of rock chips by circulating at least 150% of hole volume with mud to the surface. Thirty-five barrels of fresh water will next be circulated. Lead with $\approx\!150$ cu. ft. ($\approx\!73$ sx) of Class B with 2% metasilicate (yield = 2.06 cu. ft./sk, slurry weight = 12.5 PPG). Tail with $\approx\!110$ cu. ft. ($\approx\!93$ sx) of Class B with 2% CaCl₂ (yield = 1.18 cu. ft./sk, slurry weight = 15.6 PPG). Total cement volume is $\approx\!260$ cu. ft. based on 75% excess and circulating to surface.

Production casing will have 4-1/2" cement guide shoe and self fill float collar. Float will be placed one joint above the shoe. Six centralizers will be spaced on every other joint starting above the shoe. Six turbolizers will be placed on every other joint starting from the top of the well.

